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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,115	11/25/2003	Dae-Whan Back	45818	4503

7590 02/21/2007
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Washington, DC 20036

EXAMINER

DOAN, KIET M

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/720,115

Applicant(s)

BACK, DAE-WHAN

Examiner

Kiet Doan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song (Patent No. 7,106,690) in view of Hepler (Pub. No. 2002/0196936).

Consider **claims 1, 5**. Song teaches a method, for use in a transmitter in a mobile communication system, the mobile communication system having multiple code groups having inherent code indices in response to each of slots, selecting one code group from among the multiple code groups, and generating a second synchronization code corresponding to any one slot from among multiple slots, which are included in the selected code group, the method being performed to determine position information designating a Hadamard code necessary for generating the second synchronization code (Abstract, C1, L35-54, C5, L15-67, Fig.3a Illustrate and described), the method comprising the steps of:

(1) in response to any one slot, outputting a value, which is obtained by subtracting 1 from a code index included in the selected code group, as a binary bit row (C5, L21-36, C8, L22-34, table 6-7); and Song teach the limitation of claims as discuss **but silent on**

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(2) selecting one bit row, which employs the binary bit row as an upper bit and employs a binary code "0000" as a lower bit, as position information which designates the Hadamard code.

In an analogous art, Hepler teaches "System for generating pseudorandom sequences". Further, Hepler teaches (2) selecting one bit row, which employs the binary bit row as an upper bit and employs a binary code "0000" as a lower bit, as position information which designates the Hadamard code (Paragraphs[0025-0026], [0028-0038], Fig.7, Illustrate and described).

Therefore, it would have been obvious at the time that the invention was made that person having ordinary skill in the art to modify Song and Hepler system, such that transmitter in a mobile communication system, the method being performed to determine position information designating Hadamard code and in response to any one slot, outputting a value to provide and selecting one bit row to provide means for means for reduces interference and improved quality of transmitting having multiple code which designates the Hadamard code.

Consider **claims 2, 6, 9**. Song teaches the method as claimed in claim 1, wherein each code group has inherent code indices which are expressed by 5 bits in response to each of 15 slots (table 6 Illustrate short ID code contain 5 bits), and the binary bit row is expressed by 4 bits (Fig.3a Illustrate as the binary bit row is expressed by 4 bits).

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Consider **claims 3, 10**. Song teaches the method as claimed in claim 1, wherein step 1 comprises: temporarily storing binary bit rows of 4 bits obtained by subtracting 1 from inherent indices corresponding to each of slots included in the selected code group; and selecting and outputting a binary bit row corresponding to any one slot selected by a slot count value from among the temporarily stored binary bit rows (C5, L21-36, C8, L22-34, table 6-7 Illustrate).

Consider **claims 4, 7**. Hepler teaches the method as claimed in claim 1, further comprising step 3 of generating the Hadamard code through a logical AND operation in the unit of bit with respect to the position information and an 8 bit chip count value selecting one from among 256 sequences, and a logical XOR operation with respect to a row of bits obtained by the logical AND operation (Paragraphs [0028-0038], table 1, Illustrate 8 bit chip count value selecting one from among 256).

Consider **claim 8**. Song teaches a method, for use in a transmitter in a mobile communication system, the mobile communication system having multiple code groups which have inherent code indices in response to slots, selecting one code group from among the multiple code groups and generating a second synchronization code corresponding to any one slot from among multiple slots which included in the selected code group, the method being performed to generate a Hadamard code necessary for generating the second synchronization code (Abstract, C1, L35-54; C5, L15-67), the method comprising the steps of:

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(1) in response to any one slot, outputting a value, which is obtained by subtracting 1 from a code index included in the selected code group, as a binary bit row (C5, L21-36, C8, L22-34, table 6-7). **Hepler teaches** (2) selecting one bit row, which employs the binary bit row as an upper bit and employs a binary code "0000" as a lower bit, as position information which designates the Hadamard code; and

(3) generating the Hadamard code through a logical AND operation in the unit of bit with respect to the position information and an 8 bit chip count value selecting one from among 256 sequences, and a logical XOR operation with respect to a row of bits obtained by the logical AND operation (Paragraphs [0028-0038], table 1, Illustrate 8 bit chip count value selecting one from among 256).

Therefore, it would have been obvious at the time that the invention was made that person having ordinary skill in the art to modify Song and Hepler system, such that transmitter in a mobile communication system, the method being performed to determine position information designating Hadamard code and in response to any one slot, outputting a value to provide and selecting one bit row and generating the Hadamard code through a logical AND operation to provide means for reduces interference and improved quality of transmitting having multiple code which designates the Hadamard code.

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Conclusion

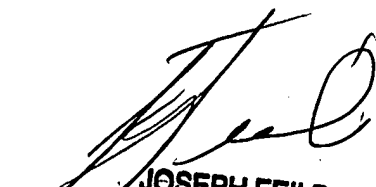
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet Doan whose telephone number is 571-272-7863.

The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kiet Doan
Patent Examiner



JOSEPH FEILD
SUPERVISORY PATENT EXAMINER